

REMARKS

The Office Action dated October 5, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-19 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 20-22 have been newly added. No new matter has been added and no new issues are raised which require further consideration or search.

The Office Action indicated that claim 3 contains allowable subject matter. Applicants wish to thank the Examiner for the allowance of this claim. However, claims 1-22 are respectfully submitted for reconsideration.

Claims 1-2 and 4-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Baum (U.S. Patent Publication No. 2004/0071164) in view of Donaldson (U.S. Patent No. 6,321,267). The Office Action took the position that Baum discloses all of the elements of the claims, with the exception of returning the held addresses to which the packet has been addressed to an end of the at least one queue. The Office Action then cited Donaldson as allegedly curing this deficiency in Baum. This rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-8 are dependent, recites an apparatus that includes at least one queue configured to hold released addresses. The apparatus further includes a detector configured to detect that a packet has been addressed to a released address held

in the at least one queue, and a returner configured to return the held address to which the packet has been addressed to an end of the at least one queue.

Claim 9, upon which claims 10-12 are dependent recites, an apparatus that includes a receiver configured to receive a packet addressed to an unused address, and a transmitter configured to send an error notification to a network node configured to manage addresses, the error notification indicating the unused address.

Claim 13 recites a system that includes a first network node configured to manage addresses. The first network node includes at least one queue configured to hold released addresses, a detector configured to detect that a packet has been addressed to a released address held in the at least one queue, and a returner configured to return the held address to which the packet has been addressed to an end of the at least one queue. The system further includes a second network node configured to forward IP data packets, the second network node that includes a receiver configured to receive a packet addressed to an unused address, and a transmitter configured to send an error notification to the first network node, the error notification indicating the unused address.

Claim 14 recites a method that includes detecting that a packet has been addressed to a released address held in a queue holding released addresses, and returning the held address, to which the packet has been addressed, to an end of the queue.

Claim 15, upon which claim 16 is dependent, recites a method that includes receiving a packet addressed to an unused address, and sending an error notification to a

network node configured to manage addresses, the error notification indicating the unused address.

Claim 17, upon which claims 18-19 are dependent, recites a computer-readable program distribution medium encoding a computer program of instructions being configured to control a processor to perform detecting that a packet has been addressed to a released address held in a queue holding released addresses. The processor may be further controlled to perform returning the held address, to which the packet has been addressed, to an end of the queue.

Claim 20 recites an apparatus that includes holding means for holding released addresses. The apparatus further includes detecting means for detecting that a packet has been addressed to a released address held in the at least one holding means, and returning means for returning the held address to which the packet has been addressed to an end of the at least one holding means.

Claim 21 recites an apparatus that includes receiving means for receiving a packet addressed to an unused address. The apparatus further includes sending means for sending an error notification to a network node configured to manage addresses, the error notification indicating the unused address.

Claim 22 recites a system that includes managing means for managing addresses, holding means for holding released addresses. The system further includes detecting means for detecting that a packet has been addressed to a released address held in the holding means. The system also includes returning means for returning the held address

to which the packet has been addressed to an end of the at least one holding means, receiving means for receiving a packet addressed to an unused address, and sending means for sending an error notification to the managing means, the error notification indicating the unused address.

As will be discussed below, the combination of Baum and Donaldson fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

Baum discloses detecting attempts to obtain IP addresses by using a fictitious MAC address in a data portion of an IP address request message. When a device connected to a LAN requires an IP address for access to an IP network, the device broadcasts an IP address assignment request message. The request is detected by an edge router on the LAN which responds by acting as a proxy to the requesting device and which initiates a dynamic host configuration protocol (DHCP) session with a DHCP server. In response to an IP address assignment request, the DHCP server assigns the requesting device an available IP address from a pool 1009 illustrated in Fig. 10. In addition, the server removes the address from the pool 1009 and creates a new entry 1016 in an IP address lease information table 1014 (see paragraphs [0101] and [0102] of Baum).

Baum does not teach “detecting that a packet has been addressed to a released address held in the queue”, as recited in claims 1, 13-14 and 17 and similarly in claims 20

and 22. The Office Action discloses a misinterpretation with respect to those features. Detecting that a packet has been addressed to a released address held in a queue does not indicate that a released address is being requested.

Donaldson is directed to filtering junk email. The method disclosed in Donaldson also provides the ability to automatically append IP addresses detected by certain sensor points back into an IP filtering list. Once the IP addresses have been detected, those hosts whose IP address has recently been detected can be subsequently blocked by a simple IP lookup mechanism. This provides a quick way to reject subsequent connections from IP addresses that have already been rejected by an active filtering operation.

The teachings of Baum and Donaldson do not disclose “at least one queue configured to hold released addresses”, as recited in claims 1, 13-14, 17 and similarly in claims 20 and 22. (Emphasis added) Referring to Baum, the pool of available addresses 1009 of Baum is quite different from a queue that is holding released addresses. The pool 1009 provides unused and available addresses, while the released addresses are addresses which were previously assigned to IP network devices and have subsequently been released.

As for Donaldson, even if the IP filtering list is regarded as queue, which it is not, Donaldson fails to teach that an address which is held in the IP filtering list is returned to “the end of the at least one queue”, as recited in claim 1, 13-14 and 17 and similarly in claims 20 and 22. The IP filtering list contains IP addresses of detected providers of junk email. Donaldson does not disclose any purpose for using a queue to hold the addresses

and certainly does not state any purpose for placing the detected IP addresses at the end of the a queue, as required by the subject matter recited in claims 1, 13-14 and 17, and similarly in claims 20 and 22.

Therefore, Donaldson does not cure the admitted deficiencies of Baum with respect to independent claims 1, 13-14 and 17, and similarly in claims 20 and 22. By virtue of dependency claims 2-8, 18-19 are also allowable over Baum and Donaldson. Withdrawal of the rejection of claims 1-8, 13-14, 18-17, 20 and 22 is respectfully requested.

With respect to independent claims 9, 15 and 21, The Office Action incorrectly stated that Baum teaches “receiving a packet addressed to an unused address”, as recited in claims 9, 15 and 21. Contrary to the interpretation disclosed in the Office Action, the pool 1009 of Baum does not receive packets with a destination indicated by addresses held in the pool 1009. The addresses held in the pool 1009 are independent of the addresses of any received packets.

Therefore, the combination of Baum and Donaldson does not disclose or suggest “receiving a packet addressed to an unused address” as recited in independent claims 9, 15 and 22. By virtue of dependency, claims 10-12 and 16 are also allowable. Accordingly, Applicants respectfully request that the rejection of claims 9-12, 15-16 and 22 be withdrawn.

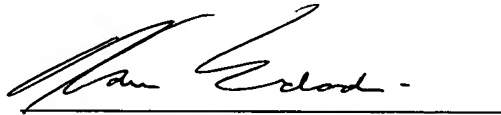
For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention.

These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-22 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosure: Additional Claim Fee Transmittal